

## **REMARKS**

Entry of the foregoing and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. Section 1.112, and in light of the remarks which follow, are respectfully requested.

The amended claims and new claims 27-28 are supported by the examples. New claim 29 is supported by paragraphs 27 and 38. New claim 30 is supported by claim 1.

Claims 1, 6, 12, 14, 15, 17 and 19 have been rejected under 35 U.S.C. Section 102(b) as purportedly being anticipated by, or under 35 U.S.C. Section 103(a) as purportedly being obvious over, Rizzardi et al. (US 2002/0007515, hereinafter Rizzardi). That rejection is respectfully traversed.

The present invention, as embodied in amended claim 1, concerns a method of improving shrink-resistance of natural fibers, synthetic fibers, or mixtures thereof, or fabrics or yarns composed of natural fibers, synthetic fibers, or blends thereof, involving (1) contacting the fibers or fabric or yarn with a bath consisting essentially of water, NaOH, H<sub>2</sub>O<sub>2</sub>, gluconic acid, dicyandiamide, and non-ionic surfactant, (2) rinsing the fibers or fabric or yarn, and (3) subsequently contacting the fibers or fabric or yarn with a bath consisting essentially of water, protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer.

Rizzardi discloses a process for pre-treating a cellulosic substrate (e.g., cotton knit material) or cellulosic blends with synthetic fiber substrate involving a bleaching cycle comprising the steps of providing a vessel; providing the substrate; providing a water bath; adding an active amount of an activating compound (e.g., a salt of an organic acid such as sodium

salts of gluconic acid); adding an active amount of caustic soda (or dicyandiamid); adding an active amount of hydrogen peroxide during the bleaching cycle; achieving a pH from about 6.0 to about 9.0 at the end of the bleaching cycle pretreatment process; heating the water bath to a temperature in excess of 50 degrees centigrade for a pre-determined period of time; and, dropping the bath. Rizzardi also discloses use of a wetting agent (e.g., ethoxylated fatty alcohol or propoxylated fatty alcohol).

The present invention, as embodied in claim 1, differs from Rizzardi in that Rizzardi does not disclose or suggest a bath consisting essentially of water, protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer.

In view of the above, withdrawal of the rejection of the claims under 35 U.S.C. Section 102(b) or 35 U.S.C. Section 103(a) is respectfully requested.

Claims 2-5, 7-11, 13, 16, 18 and 20-26 have been rejected under 35 U.S.C. Section 103(a) as purportedly being obvious over Smets et al. (U.S. Patent 6,541,438; hereinafter Smets) and Rizzardi. That rejection is respectfully traversed.

The present invention and Rizzardi have been described above.

The primary reference Smets concerns laundry detergent and/or fabric care compositions comprising a modified enzyme which comprises a catalytically active amino acid sequence of a cellulolytic enzyme linked to an amino acid sequence comprising a Cellulose Binding Domain for selective binding and hydrolysis of amorphous cellulose of cotton containing fabrics in a laundry and/or fabric care application (Abstract; column 1, lines 9-12; column 2, lines 49-62). Smets states the following (column 10, lines 15-17): "The laundry detergent and/or fabric care

compositions of the invention will comprise at least one additional detergent and/or fabric care components.” The detergent components may also include nonionic surfactants (e.g., Triton™), additional enzymes besides cellulase such as protease (column 20, lines 46-65), bleaching agents such as hydrogen peroxide (column 26, line 5), sodium sulphite (column 31, lines 19-22), triethanolamine (example 11, column 46, line 47), and NaOH (example 11, column 46, line 59).

The present invention differs from Smets in that Smets does not disclose use of gluconic acid or dicyandiamide, which is why the Examiner is forced to rely upon the secondary reference Rizzardi. Furthermore, neither Smets or Rizzardi disclose or suggest disclose or suggest a second bath consisting essentially of water, protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer.

The Examiner has alleged the following (page 5, Office Action):

...Smets is silent about the subsequent steps of treating fabric with protease, non-ionic surfactants, sodium sulfite, and triethanolamine. However, Smets clearly suggests pre and post treatment of fabrics, which may include pretreating fabric followed by subsequent post treatment with protease, non-ionic surfactants, sodium sulfite, and triethanolamine since Smets et al. clearly suggests the use of these components in their compositions....

However, Smets discloses pre- or post-treatment of fabric using Smets' laundry detergent. As noted above, Smets concerns laundry detergent and/or fabric care compositions comprising (1) a modified enzyme which comprises a catalytically active amino acid sequence of a cellulolytic enzyme linked to an amino acid sequence comprising a Cellulose Binding Domain for selective binding and hydrolysis of amorphous cellulose of cotton containing fabrics in a laundry and/or fabric care application and (2) at least one additional detergent and/or fabric care components. Thus, contrary to the Examiner's allegation, Smets does not disclose a treatment with protease,

non-ionic surfactants, sodium sulfite, and triethanolamine. The Examiner has provided no motivation whatsoever in picking and choosing these components without using Applicant's disclosure as a guide. Smets and Rizzardi do not provide any motivation for a first bath consisting essentially of water, NaOH, H<sub>2</sub>O<sub>2</sub>, gluconic acid, dicyandiamide, and non-ionic surfactant and a second bath consisting essentially of water, protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer. It is readily apparent that the Examiner has used hindsight reconstruction relying on Applicants' patent application as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claimed invention; this is strictly prohibited. *Grain Processing v. American Maize*, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

The claims do not stand and fall together:

Claim 27 states (emphasis added):

The method according to claim 1, wherein said method comprises contacting said fibers or fabric or yarn with a bath consisting essentially of water, NaOH, H<sub>2</sub>O<sub>2</sub>, gluconic acid, dicyandiamide, and non-ionic surfactant, rinsing said fibers or fabric or yarn and subsequently contacting said fibers or fabric or yarn with a bath **consisting of** water, protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer.

Claim 28 states (emphasis added):

The method according to claim 1, wherein said method comprises contacting said fibers or fabric or yarn with a bath **consisting of** water, NaOH, H<sub>2</sub>O<sub>2</sub>, gluconic acid, dicyandiamide, and non-ionic surfactant, rinsing said fibers or fabric or yarn and subsequently contacting said fibers or fabric or yarn with a bath **consisting of** water, protease and non-ionic surfactant and optionally sodium sulfite and optionally triethanolamine and optionally polyacrylamide polymer.

Claim 29 states "...wherein said natural fibers are selected from the group consisting of wool, wool fibers, and animal hair." Smets and Rizzardi are concerned only with cotton or cotton/synthetic blends.

Withdrawal of the rejection of the claims under 35 U.S.C. Section 103(a) is respectfully requested in view of the above.

In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.

In the event that there are any questions relating to the Amendment, or to the application in general, it is respectfully requested that the undersigned be contacted so that prosecution of this application can be expedited.

Please charge any required fees pertaining to this Amendment to the Deposit Account of the undersigned, No. 50-2134, and credit any overpayment to said Account.

Respectfully submitted,

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Date: 14 March 2006



S.N. 10/730,208  
Amendment (14 pages)

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